IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Yang et al.	Examiner:	Nguyen, Dustin
Serial No.:	09/866,375	Art Unit:	2154
Filing Date:	May 25, 2001	Conf. No.:	4422
Title:	Remote Control of a Client's Off-Screen Surface		

APPEAL BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In support of the Notice of Appeal filed on April 20, 2006, appealing the final

rejection of all claims in the above-identified application, Appellants provide the following

reasons that the rejection in improper. Appellants respectfully request the Board of Patent

Appeals and Interferences to reverse the Examiner's final rejection of the claimed subject

matter and to remand the claims back to the Examiner with instructions to allow the claims.

i.   Real Party in Interest

The real party in interest in the above-identified application is Citrix Systems, Inc.

ii.   Related Appeals and Interferences

No other appeals or interferences are known to Appellants, the Appellants' legal

representative, or assignee that will directly affect, be directly affected by, or have a bearing

on the Board's decision in the pending appeal.

iii.   Status of Claims

Claims 1-20 are pending and rejected in the application.

Claims 1-20 are on appeal and are set forth in Appendix A.

iv.   Status of Amendments

No amendment was filed subsequent to final rejection mailed on January 27, 2006.

v.   Summary of the Claimed Subject Matter

As defined by the claims on appeal, Appellants' invention relates to controlling, by a

server, the creation of a client's off-screen surface. A software program executes on a client

and receives instructions from a server. The server instructs the client to select a memory

region of the client for the off-screen surface and to copy graphical data transmitted by the

server to a location within the memory region. *See* claims 1 and 12; FIG. 1 (114, 118, 120

154, 156, 162), FIG. 4 (110, 118, 114, 120, 150, 154, 160), and FIG. 11 (1102, 1104, 1106,

1108, 1110, 1112, 1114); and Page 9, paragraph [0017], lines 3-14; Pages 13, paragraph

[0023], line 20 through Page 14, line 10; Page 14, paragraph [0024], lines 11-16; Page 15,

paragraph [0027], lines 18-20; Page 23, paragraph [0038], lines 14-22; Page 24, paragraph

[0040] lines 14 through Page 25 line6; Page 25, paragraph [0042], lines 17-20;

Page 26, paragraph [0044] line 21 through Page 27, line 10; Page 42, paragraph [0068], lines

8-16; Page 42, paragraph [0069], line 17 through Page 43, lines 4; and Page 43,

paragraph [0071], lines 17 through Page 44, line 19.

vi.   Grounds of Rejection to be Reviewed on Appeal

Appellants present the following issues for review:

(1) Whether claims 1, 2, 4-9, 12, and 14-18 are obvious over United States Patent No. 6,073,192 to Clapp *et al.* ("Clapp") in view of United States Patent No. 6,483,515 to Hanko ("Hanko") when the combination of Clapp and Hanko fails to teach each and every element of the claimed invention and is improper because any such hypothetical combination would change the principle of operation of the references; and,

(2) Whether claims 3, 10, 11, 13, 19, and 20 are obvious over and United States Patent No. 6,073,192 to Clapp *et al.* ("Clapp") in view of United States Patent No. 6,484,515 to Hanko ("Hanko") and in further view of United States Patent Application No. 2003/0084052 to Peterson ("Peterson") when the combination of Clapp, Hanko, and Petersons fails to teach each and every element of the claimed invention and is improper because any such hypothetical combination would change the principle of operation of the references.

vii.   Arguments

Appellants believe that the following arguments address each of the issues presented for appeal.

> **Claims 1, 2, 4-9, 12, and 14-18 are not obvious over**
> **Clapp and Hanko because any hypothetical combinations of**
> **Clapp and Hanko fail to establish a *prima facie* case of obviousness.**

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art as modified or combined, must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation

of success must both be found in the prior art, not in Appellants' disclosure. *See In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); *see also* MPEP §2142.

The initial burden is on the Examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *See Ex parte Clapp*, 227 USPQ 972, 973 (BPAI 1985); *see also* MPEP §2142.

Summary of Clapp

Clapp discusses a peripheral video conferencing system that communicates via analog and digital communication channels for transmitting video, audio, and other information from either a local or remote conferencing site. Clapp discusses that the peripheral audio/visual conferencing system operates in cooperation with a host computer system and visual conferencing application software to provide window sharing and document collaboration functions which may be initiated at either a local or remote conferencing site (see Clapp FIGS. 11 and 12).

The local host computer copies screen data to an off-screen buffer (Col. 11, lines 33-41):

> The user, at step 628, then selects a local active application window
> 602 from the menu 600 for sharing with a remote conferencing site.
> The local host computer system 244, at step 630, preferably allocates
> an appropriate amount of system memory to accommodate a local off-
> screen window buffer 604 and a local pixel update table 606. A copy
> of the pixels or pixel data defining the local active window 602 is
> transferred to the local off-screen window buffer at step 632.

The local host computer transmits the contents of its off-screen buffer to the remote host computer (Col. 11, line 65 – Col. 12, line 1, Col. 12, lines 11-17):

At an appropriate time, the pixel data residing in the local off-screen window buffer 604 is transferred to the local audio/visual communication system 242 for transmission over the communication channel 82 at step 644.

After establishing a communication link between the local and remote host computer systems 244 and 264, a full update of pixel data associated with the video image of the entire local active window 602 as reflected in the local off-screen window buffer 604 is initially transmitted over the communication channel 82 and received by the remote audio/visual communication system 262 at step 650.

The remote host computer copies the local host computer off-screen buffer contents to its off-screen buffer (Col. 12, lines 17-22):

The pixel data associated with the entire local active window 602 is first copied to the remote off-screen window buffer 610 at step 652, and subsequently transferred at step 654 to the remote active window 608 presented in the foreground of the remote display 268.

Summary of Hanko

Hanko is generally directed to updating a display device to fill a display area on the display device with a tiled pattern including repetitions of a tile image data stored at a host system interconnected to a remote system via a communication link. To achieve this result, the Hanko system transmits an image from a service computer system to a Human Interface Device ("HID"), which copies and replicates the image into an ***on-screen*** frame buffer to provide a background image on the HID.

The HID receives a single tile image and stores the tile image in an on-screen buffer (Col. 4, lines 59-64):

The HID 321 receives the display information and generates the tile pattern by performing steps including storing the tile image data starting at a location in an on-screen frame buffer corresponding to a coordinate location within the display area relative to said display area 602 (step 618).

The HID replicates the tile image in the on-screen frame buffer to provide the background image of the HID (Col. 4, lines 64-67):

copying the tile image data into the frame buffer based on the
replication information until the portion of the display area 602 is
filled with a tiled pattern (step 620).

**Any hypothetical combination of Clapp and Hanko fails to teach,
suggest, or disclose each and every element of Appellants claimed invention.**

Appellants respectfully submit that the Examiner has failed to make a prima facie

case of obviousness because the prior art references do not teach or suggest all the claim

limitations. *See In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

**Any hypothetical combination of Clapp and Hanko fails
to disclose, teach, or suggest a server instructing a client
to select a first memory region for allocation to an off-screen surface.**

In Clapp, there is no positive instruction transmitted from the local computer to the

remote computer. Said another way, the local computer is not controlling the remote

computer. While the local computer provides data to the remote computer, this is not the

same as controlling the remote computer by issuing one or more instructions to the remote

computer.

More specifically, Clapp is silent as to transmitting an instruction from the local

computer to the remote computer that instructs the remote computer to select a first memory

region of the client as an off-screen surface. This is not surprising because Clapp recites a

peripheral video conferencing system is present at both a local and a remote conferencing site

and communicates with a respective host computer system. Neither of the peripheral video

conferencing system at the local or at the remote conferencing sites instructions the other to

do anything because, in order to permit document sharing and collaboration each of the

peripheral video conferencing system needs to be able to operate independent of control of

the other. As such, Clapp does not teach *a server that instructs the client* to select a first

memory region for allocation to an off-screen surface.

Hanko fails to cure this deficiency of Clapp. As shown above, Hanko teaches that the HID does not copy the tile image into an off-screen surface. Instead, the HID copies and replicates the tile image into an ***on-screen buffer***. In fact, Hanko goes to lengths in the background section of the patent to discourage the use of an off-screen surface.

Therefore, any hypothetical combination of Clapp and Hanko fails to disclose, teach, or suggest a server ***instructing a client*** to select a first memory region for allocation to ***an off-screen surface***.

> **Any hypothetical combination of Clapp and Hanko fails to disclose, teach, or suggest a server instructing a client to copy the graphical data associated with the indicia to a particular location within the first memory region.**

Again, the claimed invention recites the server instructing the client to perform an action. Specifically, the action is to copy the graphical data associated with the indicia to a particular location within the first memory region. As discussed above, Clapp fails to disclose, teach or suggest a server instructing a client. Thefore, Clapp does not teach the specific instruction as recited in the claims.

Further, since the first memory region represents the off-screen surface Hanko the arguments present with respect to Hanko are equally applicable here. That is, Hanko is limited to dealing with an on-screen buffer and not an off-screen surface, as required by the claimed invention.

> **There is no motivation to modify the teachings of Wolff and Tucker because such a combination would change the principle of operation of Clapp and Hanko.**

Appellants respectfully submit that the Examiner has failed to make a prima facie case of obviousness for a second reason: there is no suggestion or motivation, either in the cited reference or in the knowledge generally available to one of ordinary skill in the art, to modify the Clapp and Hanko references as suggested by the Examiner since the proposed

modification changes the principle of operation of Clapp and Hanko. *See In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Appellants argument with respect to the imporoper nature of the combination can be stated simply as Hanko teaches away from using an off-screen surface. As previously explained to the Examiner, Hanko states in the Background of the patent that:

> Computer systems can display a variety of data on a display. Often, the background layer of a display shows a pattern that a user can select. Often these backgrounds are generated by repeating a single tile to fill the display area. For example, Internet web pages with textured background are usually rendered as a tile pattern. Existing rendering methods require the use of off-screen memory to store the tile pattern. The tile pattern is then transferred to on-screen memory for display. However, in some computer systems, the display devices may not include any off-screen memory. As such, the entire background comprised of multiple instances of the tile pattern needs to be transmitted for display on the terminal. However, transmitting the entire tile pattern is time consuming and wastes valuable computational time and resources.

As such, the combination of Hanko and Clapp is improper because ***Hanko teaches away from using off-screen surfaces while Clapp teach using off-screen surfaces*** and any such a combination of Clapp and Hanko changes the principle of operation of each of the references.

It is well established and known in the art that off-screen surfaces and on-screen buffers are substantially different in their operation and function. The two types of items are not interchangeable without changing the principle of operation of the device incorporating the buffers. Given that the background section of Hanko describes the failings of using an off-screen buffer to display the tile image immediately, not copying the tile image to an off-screen buffer and then transferring the tile pattern to an on-screen buffer, the combination is improper, since Hanko teaches away the techniques taught by Clapp.

Appellants, therefore, respectfully submit that there is no suggestion or motivation, either in the cited reference or in the knowledge generally available to one of ordinary skill in

the art, to modify Clapp or Hanko in the manner suggested by the Examiner. As such, the

Examiner has failed to establish a *prima facie* case of obviousness. Applicants request, for at

least these reasons, that the rejection of claims 1, 2, 4-9, 12, and 14-18 under 35 U.S.C. §103

be reversed.

> **Claims 3, 10, 11, 13, 19, and 20 are not obvious over**
> **Clapp, Hanko, and Peterson because any hypothetical combinations of**
> **Clapp, Hanko, and Peterson fail to establish a *prima facie* case of obviousness.**

Appellants respectfully submit that claims 3, 10, 11, 13, 19, and 20 depend from

allowable base claims and recite further limitations thereon. As such, the Appellants will not

argue their individual patentablity and rest on the arguments present above with respect to

independent claims 1 and 12.

vii.   **CONCLUSION**

In light of the foregoing arguments, Appellants submit that pending claims 1-20 are

patentable when compared to the prior art of record and respectfully requests that the Board

reverse the Examiner's final rejection of claims 1-20.

Respectfully submitted,
CHOATE, HALL & STEWART, LLP

Dated: September 21, 2006   \Leigh J. Martinson\
Leigh J. Martinson
Registration No.: 50,749

PATENT DEPARTMENT
CHOATE, HALL & STEWART LLP
Two International Place
Boston, MA 02110
Phone: (617) 248-4801
Fax: (617) 248-4000

CLAIM Appendix

1. (original)   A method of remotely controlling, by a server, the formation of an off-screen surface at a client coupled to the server via a communications network, the method being performed at the server and comprising the steps of:

    instructing the client to select a first memory region for allocation to the off-screen surface, the first memory region corresponding to a memory coupled to the client;

    transmitting indicia of a graphical data to the client; and

    instructing the client to copy the graphical data associated with the indicia to a particular location within the first memory region.

2. (original)   The method of claim 1 further comprising the step of:

    specifying a plurality of attributes associated with the off-screen surface.

3. (original)   The method of claim 1 wherein the indicia of the graphical data corresponds to a fuzzy key, the fuzzy key identifying a location of the graphical data within a persistent storage memory coupled to the client.

4. (original)   The method of claim 1 wherein the indicia of the graphical data corresponds to an index, the index identifying a location of the graphical data within a cache memory coupled to the client.

5. (original)   The method of claim 1 further comprising the step of:

    instructing the client to update an on-screen surface associated with the client using the copied graphical data in the off-screen surface.

6. (original)   The method of claim 1 further comprising the step of:

    storing a duplicate of the off-screen surface in a memory coupled to the server.

7. (original)   The method of claim 6 further comprising the steps of:

    upon receiving an indication of an error condition, transmitting at least one portion of the duplicate off-screen surface to the client; and

instructing the client to copy the at least one portion of the duplicate off-screen surface to an on-screen surface associated with the client.

8. (original)   The method of claim 1 further comprising the steps of:

              a)   instructing the client to select a second memory region; and

              b)   instructing the client to copy the graphical data to a particular location within the second memory region,

wherein step a) is performed in response to receiving an indication of an error condition.

9. (original) The method of claim 1 wherein the graphical data corresponds to a bitmap.

10. (original) The method of claim 1 wherein the graphical data corresponds to a glyph.

11. (original) The method of claim 1 wherein the graphical data corresponds to a strip.

12. (previously presented) A system for remotely controlling, by a server, the formation of an off-screen surface at a client coupled to the server via a communications network, the system comprising:

        a client agent executing on the client;

        a first memory region coupled to the client agent;

        an off-screen surface stored within the first memory region;

        a server agent executing on the server and coupled to the client agent; and

a graphical data, the graphical data having associated indicia and being stored by the client,

wherein the server agent

        transmits indicia of the graphical data to the client agent, and

        instructs the client to select the first memory region for allocation to the off-screen surface and to copy the graphical data associated with the indicia to a particular location within the first memory region.

13. (original) The system of claim 12 wherein the indicia of the graphical data corresponds to a fuzzy key, the fuzzy key identifying a location of the graphical data within a persistent storage memory coupled to the client.

14. (original) The system of claim 12 wherein the indicia of the graphical data corresponds to an index, the index identifying a location of the graphical data within a cache memory coupled to the client.

15. (original) The system of claim 12 wherein attributes of the off-screen surface are specified by the server agent.

16. (original) The system of claim 12 further comprising a duplicate of the off-screen surface stored in a memory coupled to the server agent.

17. (original) The system of claim 16 further comprising:

an on-screen surface coupled to the client agent, the client agent updating the on-screen surface using the duplicate off-screen surface and discarding the off-screen surface stored within the first memory region upon the occurrence of an error condition.

18. (original) The system of claim 12 wherein the graphical data corresponds to a bitmap.

19. (original) The system of claim 12 wherein the graphical data corresponds to a glyph.

20. (original) The system of claim 12 wherein the graphical data corresponds to a strip.

EVIDENCE Appendix

Not applicable to this appeal.

RELATED PROCEEDINGS Appendix

Not applicable to this appeal.